CLAIMS

What is claimed is:

1.   A method for externally managing a data within an
asynchronous pipeline, wherein said asynchronous pipeline
includes a data path and a control path, said method
comprising:

assigning a data tag value to said data;

sending said data tag value into said control path
when said data value is sent into said data path such
that said data tag value passes through said asynchronous
pipeline in parallel with said data; and

comparing said data tag value with a control tag
value; and

in response to said data tag value matching said
control tag value, permitting said data to pass to a next
stage within said asynchronous pipeline.

2.   The method of claim 1, wherein said step of assigning a data tag value comprises associating an encoded binary sequence with said data.

3.   The method of claim 2, wherein said comparing step further comprises decoding said encoded binary sequence to identify said data tag value.

4.   The method of claim 1, further comprising delivering said data tag value to a processor that is in communicative contact with said given stage.

5.   The method of claim 4, further comprising:

assigning a control tag value with respect to said data tag value; and

delivering said control tag value from said processor to said given stage.

6.   The method of claim 4, wherein said given stage includes a logic function for processing said data, said method further comprising:

determining whether or not said control tag value matches said data tag value; and

in response to determining that said control tag value matches said data tag value, delivering a control instruction from said processor to said logic function.

7. The method of claim 1, wherein said assigning step
further comprises:

receiving said data at the front-end of said
asynchronous pipeline; and

associating said data tag value with said data within
a memory device.

8.   A system for externally managing data within an asynchronous pipeline, wherein said asynchronous pipeline includes a data path and a control path, said system comprising:

processing means for assigning a data tag value to said data;

processing means for sending said data tag value into said control path when said data is sent into said data path such that said data tag value passes through said asynchronous pipeline in parallel with said data; and

logic means for comparing said data tag value with a control tag value, and in response to said data tag value matching said control tag value, permitting said data to pass to the next stage within said asynchronous pipeline.

9.   The system of claim 8, wherein said processing means
for assigning a data tag value comprises processing means
for associating an encoded binary sequence with said data.

10.   The system of claim 9, further comprising logic means
for decoding said encoded binary sequence to identify said
data tag value.

11.   The system of claim 8, further comprising processing
means for delivering said data tag value to a processor
that is in communicative contact with said given stage.

12.   The system of claim 11, further comprising:

        processing means for assigning a control tag value
with respect to said data tag value; and

        processing means for delivering said control tag
value from said processor to said given stage.

13.   The system of claim 11, wherein said given stage
includes a logic function for processing said data, said
system further comprising:

        logic means for determining whether or not said
control tag value matches said data tag value; and

        processing means responsive to said control tag value
matching said data tag value for delivering a control
instruction from said processor to said logic function.

14. The system of claim 8, wherein said processing means
for assigning a data tag value to said data further
comprises:

    processing means for receiving said data at the
front-end of said asynchronous pipeline; and

    processing means for associating said data tag value
with said data within a memory device.